

SHORT PAPER

Changing paradigms of dermatology practice in developing nations in the shadow of COVID-19: Lessons learnt from the pandemic

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Abstract

At present, routine dermatology practices stay mostly disrupted worldwide owing to the ongoing COVID-19 pandemic. However, dermatology services need to be resumed in future and dermatologists especially in developing countries face a mammoth task of devising plans to tackle the upcoming surge of patients while still maintaining the precautions to avoid risk of infection to health care workers and our patients. Teledermatology practice is a viable alternative and there is need of starting functioning teledermatology centers at primary health care centers and training health care workers in telemedicine. Several steps like increasing the working hours of outpatient clinics, posting dermatologists and health staffs in shifts, encouraging online registration and payment, providing time slots to patients should be taken to prevent overcrowding at outpatient departments in hospitals of developing countries like India where the usual patient turnover during summers maybe around 600 to 800 per day. Once diagnosed by the dermatologist, a subsequent meticulous use of teledermatology can limit the number of follow-up visits. To avoid student gatherings, the undergraduate and postgraduate teaching schedule should be replaced by online or virtual teaching in form of webinars and video conferencing. Above all, intense upgradation of health care infrastructure, recruitment, training of new health care staffs on mass level and huge investment in health care sector is required in all the developing countries.

KEYWORDS

Dermatology practice in shadow of COVID, Changing dermatology practice post COVID.

As many of us are still sitting safely in the confines of our homes (thanks to our friends who are fighting the coronavirus disease-2019 (COVID-19) epidemic out there on frontline), the thought of "how things will turn out in future" crosses most of our minds. The present epidemic has halted almost everything around the globe, and we cannot evade the aura of uncertainty that has spread everywhere. Our country is presently under "lockdown."¹ Among all this, as academicians, clinicians, and specialists, we do think intermittently on how are we going to serve our patients and students while maintaining the much coveted "social distancing" till the present pandemic ends forever.

Although dermatologists have not been involved in direct care of critically ill and in-patient COVID cases in India, few of us are serving as volunteers at screening and quarantine centers. Amidst an official or virtual lockdown in most of the affected developing countries, routine dermatology services stay mostly disrupted owing to the closure of dermatology outpatient departments in many hospitals (in order to cut down on gathering); turning of dermatology wards into COVID care and quarantine centers; and deploying health care workers for COVID care.

Considering the fact that a significant proportion of dermatology patients have ailments which are not life threatening or significantly

disabling, these steps are justified seeing the burden and shortages the health care is facing at present. However, if the current pandemic is prolonged which seems quite probable going by the current trends, a majority of our routine dermatology patients will require active intervention eventually. During the quarantine period, there is a risk of exacerbation of various otherwise chronic dermatological disorders, which may cause a rebound increase in outpatient consultation requests to dermatologists after a while. Therefore, we as dermatologists face a mammoth task of devising plans to tackle the upcoming surge of patients while still maintaining the precautions to curtail large outpatient gatherings and social distancing, to avoid risk of infection to health care workers and our patients.

Teledermatology practice is a viable alternative,² and has been around for quite some time now; however, this facility has several challenges in resource constrained settings including lack of widespread availability, misdiagnosis resulting from poor photo quality, inadequate online medical data of the patient, communication gap between the treating dermatologist and patients, and inherent problems in carrying out investigations like KOH mount, slit skin smear, and skin biopsy. Opening teledermatology centers at primary health care centers; and training health care workers in telemedicine may take care of the some of the above limitations; however, this is again limited by cost, availability of human resources and the maximal of all, time constraint, especially at present.

Maintaining social distancing among patients visiting the premises of outpatient departments in hospitals of developing countries like India (which almost resembles the time square on new-year eve) in a normal non-COVID scenario is almost impossible. At our center for instance, the usual patient turnover during summers is around 600 to 800 per day, which are managed in an outpatient department comprising of a few rooms. A way of avoiding overcrowding among the patients in the waiting areas involves increasing the working hours of outpatient clinics; and posting dermatologists and health staffs in shifts; and if required keeping the outpatient clinics open even during

weekends. Crowding at the registration and payment counters may be avoided by increasing the number of such counters and encouraging online registration and payment. Time slots can be provided to the patients at the time of registration which can further help in preventing overcrowding. Limiting the number of accompanying attendants is also of paramount importance to further regulate crowding at outpatient clinics.

Screening and regulating the entry of all patients and attendants to dermatology outpatient clinics by a health care staff using an appropriate questionnaire to determine the risk of COVID 19 should be done to further lower the risk of transmission (Table 1). Other precautions like use of personal protective equipment, rational hand hygiene and use of sanitizers should be encouraged at all points of contact.³ It is also necessary to maintain a reserve pool of resident and consultant dermatologist by rostering only a section of the medical personnel for clinical duties at any given time.

Once diagnosed by the dermatologist, a subsequent meticulous use of teledermatology can limit the number of follow-up visits, especially those related to the routine blood investigations pertaining to the commonly used immunosuppressants. Further, as dermatology is primarily a visual science, designing a transparent plastic or glass chamber for dermatologists from where the patients can be visually examined, may enhance the degree of doctor-patient interaction comfort, while keeping the risk of COVID transmission low. Inpatient management can be further challenging since in developing countries, several patients share the same cubicle and necessary commodities like washrooms. At such places, presence of either symptomatic or asymptomatic COVID infection might jeopardize the safety of other patients and health care staff. Increasing the production and availability of COVID-testing kits, and screening of every patient and accompanying person should be ascertained before admission to general inpatient services. Screening of health care staffs at frequent and regular intervals are few steps, which should be taken in the long run.

To avoid student gatherings, the undergraduate and postgraduate teaching schedule remains suspended or mostly have been replaced by online or virtual teaching in form of webinars and video conferencing.⁴ The traditional classroom examination is being substituted by online examinations. The practical examinations are also being conducted on videoconferencing where real patients are being replaced by virtual case scenarios and images. All these steps although may marginally affect the quality of academics, but are quite justified seeing the risks of large student gatherings in terms of transmission of COVID-19 especially to frontline health care workers.

Although the above-mentioned measures may sound cumbersome and inconvenient, we should acknowledge the fact that they have to be implemented in the long run and would be the new "normal." Implementing the above-mentioned measures will also require intense upgradation of health care infrastructure, recruitment, and training of new health care staffs on mass level and huge investment in health care throughout the world. In most of the developing countries like India, governments spend a meager 1% to 2 % of GDP on health care despite the WHO recommendation of 5%.⁵ As we say crisis is a great teacher, there are several lessons to be learnt from the current COVID pandemic.

TABLE 1 Questionnaire to screen for COVID-19 cases at dermatology outpatient clinics

Questions	Yes	No
Do you have fever?		
Do you have dry cough?		
Do you have shortness of breath?		
Do you have sore throat?		
Do you have runny nose?		
Do you have diarrhea?		
Do you have bodyache?		
Have you or your family members been in contact with a known COVID-19 patient in last 14 days?		
Do you or your family members have a history of foreign travel in last 14 days?		
Are you a health care worker?		

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

AUTHOR CONTRIBUTIONS

Sheetanshu Kumar and Keshavamurthy Vinay had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: Sheetanshu Kumar, Keshavamurthy Vinay. Acquisition, analysis, and interpretation of data: Sheetanshu Kumar, Anuradha Bishnoi. Drafting of the manuscript: Sheetanshu Kumar, Anuradha Bishnoi. Critical revision of the manuscript for important intellectual content: Anuradha Bishnoi, Keshavamurthy Vinay. Administrative, technical, or material support: Sheetanshu Kumar, Keshavamurthy Vinay. Study supervision: Anuradha Bishnoi, Keshavamurthy Vinay.

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